



Intel740™ Graphics Accelerator Software

Specification Update

Revision 1.5

October 1998

Notice: The Intel740™ graphics accelerator may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are documented in this Specification Update.

Order Number: **Not Applicable**



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The Intel740™ graphics accelerator may contain hardware and/or software design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available upon request.

Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order.

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Revision History

Date of Revision	Version	Description
April, 1998	1.0	Initial Release
April, 1998	1.1	Added the following ERRATA: <ul style="list-style-type: none">Driver WinBench* 98Errata (Windows* 9x) 5,6,7; Driver Errata (Windows* NT) 6,7,8; Video BIOS Errata 3,4,5,6 Added Specification Clarification 1
May, 1998	1.2	Added the following ERRATA: <ul style="list-style-type: none">Driver Errata (Windows* 9x) 8-28; Driver Errata (Windows* NT) 9; Video BIOS Errata 7, 8 Added Specification Clarifications 2, 3
July, 1998	1.3	Added the following ERRATA: <ul style="list-style-type: none">Driver Errata (Windows* 9x) 29-59; Driver Errata (Windows* NT) 10-25; Video BIOS Errata 9-16 Added Specification Clarification 4
August, 1998	1.4	Added the following ERRATA: <ul style="list-style-type: none">Driver Errata (Windows* 9x) 60-86; Driver Errata (Windows* NT) 26- 41; Video BIOS Errata 17
October, 1998	1.5	Added the following ERRATA: <ul style="list-style-type: none">Driver Errata (Windows* 9x) 87-109; Driver Errata (Windows* NT) 41-45; Video BIOS Errata 17

Preface

This document is an update to the specifications contained in the *Intel740™ Graphics Accelerator Datasheet*, (Order Number 290618), as well as the *Intel740™ Graphics Accelerator Software Developer's Manual*, (Order Number 290617), and contains software issues affecting Windows* 98, Windows* 95 (OSR2.1), and Windows* NT 4.0 Production drivers and Video BIOS releases using the Intel740™ graphics accelerator. For the latest hardware and documentation related issues, refer to the *Intel740™ Graphics Accelerator P854 Hardware Specification Update*, (Order Number 290622).

Component Marking Information

Stepping	S-Spec	Top Marking	RAMDAC Freq.	Notes
P854 A-1	N/A	FW82740 Q622ES	203 MHz	Engineering Sample, FM Test
P854 A-2	N/A	FW82740S2292 Q631ES Q632ES	203 MHz	Engineering Sample
A-2	SL292	Intel740™ chip or Intel740 chip FW82740 Intel (M) © '97	203 MHz	Production Material

Component Identification via Programming Interface

The Intel740™ graphics accelerator stepping can be identified by the following register contents:

Intel740™ graphics accelerator Stepping	Vendor ID ₁	Device ID ₂	Revision Numbers
P854 A-1	8086h	7800h	01h
P854 A-2	8086h	7800h	21h

NOTES:

1. The Vendor ID corresponds to bits 15-0 of the Vendor ID Register located at offset 00-01h in the PCI function 0 configuration space.
2. The Device ID corresponds to bits 15-0 of the Device ID Register located at offset 02-03h in the PCI function 0 configuration space.
3. The Revision Number correspond to bits 7-0 of the Revision ID Register located at offset 08h in the PCI function 0 configuration space.

Nomenclature

Errata are design defects or errors. Errata may cause the Intel740™ graphics accelerator behavior to deviate from published specifications. Hardware and software designed to be used with any given software release must assume that all errata documented for that release are present on all software identified by that release.

Programming Recommendations identify programming idiosyncrasies to benefit in the development of Intel740™ graphics accelerator software.

General Software Considerations identify potential software concerns not directly attributable to the Intel740™ graphics accelerator software stack.

Specification Changes are modifications to the current published specifications. These modifications will be incorporated in future releases of the affected specifications.

Specification Clarifications describes a specification in greater detail or highlights complex design situations that may require implementation changes. These clarifications will be incorporated in future releases of the affected specifications.

Documentation Changes include typos, errors, or omissions from the current published specifications. These clarifications will be incorporated in future releases of the affected specifications.

Builds determine the current version number of the Intel740 Graphics Accelerator Software Driver Release (SDR) kit.

S-Specs are temporary exceptions to the published specifications and apply only to the units assembled under that s-spec.

Summary Table Of Changes

The following table indicates the issues for Software Errata which apply to all currently available software driver releases and planned releases. Intel intends to account for the outstanding issues through documentation or specification changes as noted. This table uses the following notations:

Codes Used in Summary Table

X:	Issue pertains to a particular software release and may pertain to releases previous to the indicated release.
Fix:	This erratum is intended to be fixed in a future release of the software.
Fixed:	This erratum is fixed in the current software release.
NoFix	There are no plans to fix this erratum in the future software release.
NDR:	Non Intel740™ Driver and/or BIOS Related

Driver Errata (Windows* 9x Release)

NO.	PV 1.0	PV 1.0a	PV 1.5	PV 2.0a	PV 2.1	PV 3.0w	Future Plans	Errata
1	x	x	x	Fixed			Fixed	Video for Windows* (VFW) support
2	x	x	Fixed				Fixed	TV-Out support
3	x	Fixed					Fixed	Application conflict in traditional Chinese OS
4	x	Fixed					Fixed	Applications running in full screen exclusive mode
5	x	x	Fixed				Fixed	Application title screens shown in upper-left
6	x	x	Fixed				Fixed	Windows* 95 shutdown screen shows artifact
7	x	x	Fixed				Fixed	OS/2 boot fail with Intel740™ drivers
8	x	x	Fixed				Fixed	Surface Pitch incorrect for flipping surfaces in some modes
9	x	x	Fixed				Fixed	Cybergladiators characters not textured
10	x	x	Fixed				Fixed	Taskbar icon for minimized applications become corrupted
11	x	x	x	x			Fix	Incorrect error message when updating driver in Windows* 98
12	x	x	Fixed				Fixed	Adjusting gamma correction can result in black screen

NO.	PV 1.0	PV 1.0a	PV 1.5	PV 2.0a	PV 2.1	PV 3.0w	Future Plans	Errata
13	x	x	Fixed				Fixed	On color tab of property sheet, some pixels are not erasing
14	x	x	Fixed				Fixed	Bob mode not disabled in UpdateOverlay
15	x	x	Fixed				Fixed	Corruption in application at bottom of screen
16			x	Fixed			Fixed	No persistence across boots
17			x	x	x		No Fix	720x480 and 720x576 not supported in PAL
18			x	Fixed			Fixed	TV-Out is too wide on some PAL monitors
19			x	x			Fix	Video overlay is off by a pixel
20			x	x			No Fix	Distorted splash screen
21			x				Fix	Jamming
22			x				Fix	Scrambled screen
23			x	Fixed			Fixed	Copy protection returns incorrect result
24			x	Fixed			Fixed	Disabling copy protection returns error message
25			x	Fixed			Fixed	User must use mouse to adjust
26			x	Fixed			Fixed	Scrambled DOS full window in TV only configuration
27			x	Fixed			Fixed	WinBench* 98 page faults
28	x	x	x	x			Fix	Banked mode support
29				Fixed			Fixed	With virtual desktop, TV-Out signal is lost/ scrambled
30				x			Fixed	TV garbling during early booting with monitor enabled
31				Fixed			Fixed	Left/Right position corrupts TV after full-screen DOS box
32				Fixed			Fixed	TV-Out settings not persistent after monitor wakeup
33			x	x		Fixed	Fixed	NEC monitors not listing correct refresh rate selections
34			x	Fixed			Fixed	WinBench* 98 hangs when run twice
35			x	x	Fixed		Fixed	Disabling Copy Protection returns incorrect message
36			x	Fixed			Fixed	EnumDisplaySettings is EXTREMELY slow
37				Fixed			Fixed	Virtual desktop active but does not show in properties
38				Fixed			Fixed	Corruption under software cursor in Excel and Access
39				Fixed			Fixed	Install display adapter software dialog freezes
40				x	Fixed		Fixed	Andretti Racing mode changes cause corruption

NO.	PV 1.0	PV 1.0a	PV 1.5	PV 2.0a	PV 2.1	PV 3.0w	Future Plans	Errata
41				Fixed			Fixed	TV settings not restored after full-screen DOS box
42			x	x	x		No Fix	Bad timing in some modes
43			x	x	x		No Fix	Quake 320x480 shows line of corruption
44				x	x		Fix	With TV-Out enabled, desktop image at 800x600 is too wide for monitor
45			x	x	x		Fix	Left half of screen flashes black on mode changes
46				Fixed			Fixed	Macrovision not available in PAL
47				Fixed			Fixed	WHQL: D3D Texture Colorkey fails
48				Fixed			Fixed	D3D Chromakey4444pf, Chromakey5551pf, and Chromakey565pf Functional tests fail
49			x	Fixed			Fixed	Textures lost in Redline Racer after suspend or alt-enter
50			x	Fixed			Fixed	F22 ADF White Screen Bug with 740
51			x	Fixed			Fixed	WHQL: TDDraw Overlay test fails
52				x	x		Fix	WHQL: VPE and Kernel Test fails
53				x			Fix	Preview mode screen corruption after change to & from 8bit
54				Fixed			Fixed	WHQL: Constant corruption in 1280x1024x16bbpxOptimal
55			x	Fixed			Fixed	Cannot change refresh rate on SuperMicro/AMI Motherboards
56				Fixed			Fixed	Refresh rate "optimal" shows 61.2Hz instead of 84.6 with NEC
57				Fixed			Fixed	WHQL: Skiing.avi with overfly.exe crashes
58			x	Fixed			Fixed	Alt-tab during Kinesub causes bad textures
59				Fixed			Fixed	The refresh rate "optimal" is not stable with Windows* '95 and '98
60				x		Fixed	Fixed	Version tab missing
61				x	x		Fix	Codec incorrectly loaded with driver
62								Incorrect name for the video display dialog box
63				x	x		Fix	Changing to 1600x1200x8bit with preview video crashes application
64				x	x		Fix	Unable to select full size (1:1)
65				x	x		Fixed	Cancel button does function properly for video display
66				x	Fixed		Fixed	Brightness button not working properly for video display
67				x	Fixed		Fixed	Win98* Screen Saver Corruption
68				x	x		Fix	TV and PC monitor black screens after clicking PAL button or after mode changes

NO.	PV 1.0	PV 1.0a	PV 1.5	PV 2.0a	PV 2.1	PV 3.0w	Future Plans	Errata
69						Fixed	Fixed	TV-Out persistence application starts too late
70				x	x		No Fix	MacroVision not persistent
71				x	x		Fixed	Switching TV-Out settings several times causes crashes
72				x	x	NDR	NDR	TV-Out size buttons do not gray at extremes
73				x	x	Fixed	Fixed	3D pipes screen saver draws over password box
74				x	x		No Fix	Exiting OpenGL plug-ins causes Invalid Page Fault
75					x		No Fix	Realimation causes an invalid page fault
76				x	x		No Fix	OpenGL Z-buffer incorrect in Lightwave 3D and Dir 3D
77	x	x	x	x	x	Fixed	Fixed	Total AGP memory reported greater than AGP aperture size
78				x	x		Fix	No live video nor closed caption when switching back to TV and browser
79	x	x	x	x	x	Fixed	Fixed	Blt from Local to AGP is missing a clear dependency call
80	x	x	x	x	x	NDR	NDRx	WHQL: DCT GDI Rate Test Fails
81						Fixed	Fixed	WHQL: DCT PC98 downloadable RAMDAC not detected
82	x	x	x	x	x	NDR	NDR	WHQL: Version numbers for TV-Out file inconsistent for 9x and NT
83	x	x	x	x	x		Fix	WHQL: Version numbers nonexistent for gfxmulti.
84							NDR	Cannot restart Forsaken after playing 1024x768 mode
85							NDR	WHQL: GDI w/Poly Clip fails on Win95 only
86	x	x	x	x	x	Fixed	Fixed	WHQL: Video Mem Management Test Fails
87							Fix	WHQL: Multi Monitor partially implemented on non existing feature
88						Fixed	Fixed	WHQL: Digital Signature Entries need to be put in INF files
89							Fix	WHQL: Surface Flipping Test Failure Possible
90						Fixed	Fixed	WHQL: Case Video Stream reset case #18 hangs the system
91						Fixed	Fixed	WHQL: DCT Font Test hangs in all modes with OSR2.1
92						Fixed	Fixed	WHQL: Disptest fails "Pixel disappears"
93						Fixed	Fixed	WHQL: Codecs not installed on clean system
94							NDR	WHQL: "Multi-Monitor" 15.4.5 Failure - any window

NO.	PV 1.0	PV 1.0a	PV 1.5	PV 2.0a	PV 2.1	PV 3.0w	Future Plans	Errata
95						Fixed	Fixed	WHQL: DOS window corrupted when opened to full screen
96						Fixed	Fixed	WHQL: VXD File Version string shows N/A in Fileview.exe
97							NDR	WHQL: 3dPipe screen saver with Display prop. page is corrupt
98							NDR	WHQL DCT Test fails ESI/EDI
99						Fixed	Fixed	WHQL: VFW AVI test leaves the cursor corrupted
100							NDR	WHQL: Winbench test fails in 1600x1200x8bpp
101						Fixed	Fixed	WHQL: "Nature" screen saver is corrupted
102						Fixed	Fixed	WHQL: Vcaptest 12 Fails (videostreamfini)
103						Fixed	Fixed	WHQL: Running vcaptest crashes
104							NDR	WHQL: Vcaptest gets an invalid page fault
105								WHQL: Disptest fails 640x480x16bpp on mode 4
106						Fixed	Fixed	WHQL: Non-Overlay AVI in full-screen is corrupted
107						Fixed	Fixed	WHQL: gfx.inf has reboot command
108							NDR	WHQL: TDDLong case 50 hangs
109							Fix	WHQL: Multi-Monitor does not work as a Primary Monitor

Driver Errata (Windows* NT 4.0 Release)

NO.	PV1.0	PV1.5	PV2.0	PV 3.0w	Future Plans	Errata
1	x	Fixed			Fixed	OpenGL screen saver causes system failure
2	x	Fixed			Fixed	Bootling in VGA mode causes blue screen
3	x	Fixed			Fixed	Multiprocessor support
4	x	x	Fixed		Fixed	TV-Out support
5	x	x	Fixed		Fixed	Video for Windows* (VFW) support
6	x	Fixed			Fixed	Overlay corruption on mode change to 1600x1200
7	x	Fixed			Fixed	Multiple mode tests in VGA mode
8	x	Fixed			Fixed	Mode test preview screen shows corruption
9	x	x	Fixed		Fixed	Cannot change modes if running SoftICE
10	x	x	Fixed		Fixed	F/A 18 Korea has black square cursor overlay
11			Fixed		Fixed	Animated cursors decreases WinTune97 video performance
12			Fixed		Fixed	Macrovision not available in PAL
13			Fixed		Fixed	Flipping thru size extents always causes loss of output
14			Fixed		Fixed	MacroVision ownership not enforced
15			x		NDR	BIOS information in Windows* NT 4.0 property page anomalous
16			Fixed		Fixed	Video overlay is off by a pixel
17			x		NDR	Window* NT 4.0 logon seemingly hangs with 16MB RAM
18			Fixed		Fixed	Driver fails on GX-based systems
19		x	Fixed		Fixed	Left-clipping of glyphs exploits HW bug
20		x	Fixed		Fixed	Invalid resolutions selectable
21		x	Fixed		Fixed	Corruption at bottom of screen in Pandemonium
22		x	x		NDR	Cannot change refresh rate on SuperMicro/AMI Motherboards
23			Fixed		Fixed	Blue screen occurs when OGL screen saver executes
24		x	Fixed		Fixed	UpdateOverlay and Flip do not set the buffer pointer's fourth address byte, MR50
25			Fixed		Fixed	WHQL: Random create/release surfaces 100x fails on 4megs
26			x		NDR	Sys drivers give fail to load error with 3rd party card
27			x		NDR	Clicking on ULEAD capture window causes it to freeze
28			x		Fix	S-video input choice not persistent after screen saver pops activates
29			x		Fix	Video driver name displayed is incorrect
30		x	x		Fix	Brightness setting not persistent
31		x	x		Fix	Saved TV standard PAL_N shows problems at the next launch of

NO.	PV1.0	PV1.5	PV2.0	PV 3.0w	Future Plans	Errata
32			x		No Fix	Video application terminated when full DOS window pops up
33					No Fix	Screen corruption for PointCast full screen application
34					?	gfixi2c.sys does not load under a certain hal.dll
35					?	Left/Right position buttons not updated after format change
36					?	All controls should gray when TV-Out is disabled
37		x	x		Fix	Keyboard locked out at position extremes
38					NDR	Enabling and disabling TV-Out in PAL causes split or no output
39					NDR	AVI's and Foxbear corrupt alt-tab application box
40			x			WHQL Tddraw test case 13 fails with surface corrupt
41					Fix	Videoset "Show 1 font" Set mode causes blue screen error
42				Fixed	Fixed	NT4.0 Install Blue Screen with 64MB SDRAM and Intel740™ chip GA
43				Fixed	Fixed	Driver Reports wrong version in property pages
44				Fixed	Fixed	OGL Evaluators test fails
45				Fixed	Fixed	The INF file for NT is broken under NT5.0

Video BIOS Errata

NO.	212	220	230	231	Future Plans	Errata
1	x	Fixed			Fixed	Low resolution modes are being set to wrong refresh rate
2	x	Fixed			Fixed	Display Data Channel not detected on some monitors
3	x	x	Fixed		Fixed	Screen corruption in mode 6A (800x600x16 colors)
4	x	Fixed			Fixed	Application corrupt on title screen
5	x	x	Fixed		Fixed	Screen corruption with 640x400x16, 24 bpp
6	x	Fixed			Fixed	Red border around screen
7	x	x			Fix	Corrupt screen before Scandisk blue screen
8	x	Fixed			Fixed	Application flashes in two modes on 2MB card only
9		x	x		Fixed	BIOS function doesn't return 70 Hz Option
10		x	x		No fix	VBE test corrupted in 24bpp banked mode
11		x	x		Fix	Armored Fist2 returns to desktop at start of mission
12	x	x	x		Fixed	Wing Command IV not legible in SVGA 16bit MSDOS 6.22
13			x		Fix	DOS Text is cut off on bottom of TV screen
14			Fixed		Fixed	Watermarks appear with 1280x1024x8/16 x 85Hz WinBench*98 Video test
15	x	x	x		Fix	When rebooting, you have to turn off and on the monitor
16			x		Fix	Screen corruption when changing mode on video overlay
17	x	x	x		Fix	DDC CLK level should be kept high after data transfer

Specification Changes

NO.	Specification Changes
	There are no Intel740™ Graphics Accelerator Specification Changes

Specification Clarifications

NO.	Specification Clarifications
1	For optimal performance
2	TV-Out
3	Operating system support
4	Video Capture

Documentation Changes

NO.	Documentation Changes
	There are no Intel740™ Graphics Accelerator Documentation Changes.

ERRATA (Windows* 9x)

1. Video for Windows* (VFW) support

Problem: VFW applications are not supported. This includes all video for Windows* (VFW) Video Capture, TV-In, intercast, and video conferencing type applications.

Implication: No support for VFW applications.

Status: See Summary Table Of Changes at the beginning of the document.

2. TV-Out support

Problem: The Intel740™ graphics accelerator drivers do not support TV-Out. The TV-Out portion of the code has not been enabled in the drivers.

Implication: No support for TV-Out applications.

Status: See Summary Table Of Changes at the beginning of the document.

3. Application conflict in traditional Chinese OS

Problem: Some localized versions of the operating system may generate null as a parameter, on behalf of an application, indicating to the Intel740™ drivers to do nothing. This may cause the operating system to generate a general page fault (GPF) error. This has been observed while running the “5000 years Chinese History” application on the traditional Chinese version of OSR2.1. Specifically, when executing the setup program for the application, Windows* reports that the setup application has caused an error (GPF). When the detail button is selected to determine the cause of the error, Windows* indicates that the error is caused by the gxfdrv.dll driver. This is the Intel740™ graphics accelerator MiniDisplay driver. This error has not been detected when running the English version of OSR2.1.

Implication: Localized versions of the operating system that generate a null parameter on behalf of an application, may cause a GPF error. The system must be reset to continue normal operation.

Status: See Summary Table Of Changes at the beginning of the document.

4. Applications running in full screen exclusive mode

Problem: When running any application in full screen exclusive mode, a general page fault error (GPF) may occur. This has been observed while running the WinBench*98 quality test with “All Tests” selected. The benchmark indicates that “WBB3DBR or 2DBV132 caused an invalid page fault error in module gxfdrv.drv. This is the Intel740™ graphics accelerator MiniDisplay driver.

Implication: A general page fault error may occur when running any application in full screen exclusive mode in conjunction with the Intel740™ graphics accelerator drivers. Depending on the application, the system may need to be reset. In the case of WinBench*98, operation will continue normally without the need to reset the system, however, the quality test results will be incorrect.

Status: See Summary Table Of Changes at the beginning of the document.

5. Application screen shown in upper-left portion of display

Problem: When starting an application for the first time, it may come up in 320x400 window. It should be full screen, but it's windowed in the upper left of the screen since the desktop resolution is greater than 320x400.

Implication: Applications may show up windowed in the upper left of the screen instead of filling the whole screen. This may happen only with the title screen of the application.

Status: See Summary Table Of Changes at the beginning of the document.

6. Windows* 95 shutdown screen shows artifact

Problem: After exiting a 3D application, and then shutting down the system, the Windows* 95 shutdown screen may become blurry prior to the system shutting down. This only occurs when the desktop is set to 640x480x16bpp modes.

Implication: Windows* 95 exit splash screen may become blurry before the system shuts down.

Status: See Summary Table Of Changes at the beginning of the document.

7. OS/2 boot fail with Intel740™ drivers

Problem: Intel740™ graphics accelerator driver will not load on a OS/2 system.

Implication: System may hang during driver load.

Status: See Summary Table Of Changes at the beginning of the document.

8. Surface Pitch incorrect for flipping surfaces in some modes

Problem: In the following scenarios, the incorrect pitch is used for the rendering surfaces causing the rendered images to be improperly tiled and corrupted. Double/triple buffered rendering surfaces are created by allocating each surface separately and manually attaching the surfaces.

The incorrect pitch is assigned for the following modes or surface dimensions:

400x300x16
720x480x16
1152x864x16

Note: This does not occur if the application allocates all of the surfaces by setting the backbuffer count during the createsurface call. The surfaces are created and attached with the correct pitch. This is the most common method used applications today.

Implication: Visual anomaly. Images may not be rendered correctly- diagonal lines will appear on (and cover) the entire screen.

Status: See Summary Table Of Changes at the beginning of the document.

9. Cybergladiators characters not textured on Intel® 440 BX platforms

Problem: Cybergladiators*, a Direct3D* game, does not texture the characters properly; the characters are textured with vertical lines. This error could not be repeated on any Intel®440 LX systems.

Implication: Visual anomaly. Improper texturing -characters are textured with vertical lines.

Status: See Summary Table Of Changes at the beginning of the document.

10. Taskbar icon for minimized applications become corrupted

Problem: The minimized icons (in the taskbar) for any application can become corrupted. If the user starts with a desktop setting of 800x600x16bpp with minimized icon(s) then switches mode to 800x600x256colors, the icon(s) may have different (incorrect) colors.

Implication: Visual anomaly. Minimized icons may become corrupted (incorrect colors) if user changes mode.

Status: See Summary Table Of Changes at the beginning of the document.

11. Incorrect error message when updating driver in Windows* 98

Problem: When updating the Intel740™ drivers in Windows* 98 through the recommended method, the user may get the message that they are currently using the latest driver. However, should not be the case since they are updating the driver, and the current driver should be the best, not the older version that is currently on their system.

Note: To avoid this error message, the user can run setup.exe that is included with the driver.

Implication: Users updating the driver using Microsoft's "recommended" method (instead of the Intel740 chip setup.exe program) will not see newer drivers as "updated" versions.

Status: See Summary Table Of Changes at the beginning of the document.

12. Adjusting Gamma correction can result in black screen

Problem: In the display properties page, under the color tab, the user can turn the whole screen black by adjusting the gamma correction sliders (gamma, brightness, and contrast) all the way down.
Note: When the monitor goes black, the user could press "Alt-D" (change settings to default) or "ESC" key (exits display properties without saving), and return the monitor on to the previous setting.

Implication: It is possible for the user to turn the screen to black with the gamma correction adjustments. With the black screen, the user will not be able to see the screen, and therefore, can not correct the adjustments. If they hit 'enter' at this point, which will save the settings, the user will be stuck with a black screen.

Note: There is no easy way to recover from this if the user has applied the changes!

Status: See Summary Table Of Changes at the beginning of the document.

13. On color tab of property sheet, some pixels are not erasing

Problem: In the display properties page, under the color tab, moving the brightness bar will leave a red pixel in the bottom left hand corner of the 'Gamma Ramp' graph. The pixel should be drawn to white, but it remains red.

Implication: Visual anomaly. Pixels are not erased on the 'Gamma Ramp' graph when user moves the brightness bar, that is, some of the red pixels should be changed to white.

Status: See Summary Table Of Changes at the beginning of the document.

14. Bob mode not disabled in UpdateOverlay

Problem: Bob mode is not disabled in UpdateOverlay. This will cause applications (such as software DVD and hardware DVD) that utilize bob to function improperly.

Implication: Visual anomaly. Video will appear "jumpy" without proper bobbing.

Status: See Summary Table Of Changes at the beginning of the document.

15. Corruption in application at bottom of screen

Problem: Intel740™ driver will sometimes return engine NOT busy status when it was actually busy at the time. The application was not calling driver's Lock32 before screen updates. The Lock32 ensures

the engine is NOT busy, and this is the correct way for applications to behave. Application was relying on GetBltStatus before screen updates.

Implication: Visual anomaly. Corruption at bottom of screen- image flashes.

Status: See Summary Table Of Changes at the beginning of the document.

16. No persistence across boots

Problem: When the system is reset, the TV-Out brightness, flicker filter, overscan, position, and NTSC/PAL sub modes (NTSC-J, PAL-60, PAL-N, PAL Nc, and PAL-M) will not maintain their pre-shutdown settings. In addition, when a mode change (any mode change) occurs, the TV-Out position and overscan settings will not maintain their pre-mode-change values. Note: the 1.5 drivers only support NTSC, PAL, and NTSC-J.

Implication: User will have to configure settings every time they boot up.

Status: See Summary Table Of Changes at the beginning of the document.

17. 720X480 and 720X576 not supported in PAL

Implication: These modes are popular S/W DVD and H/W DVD modes for those S/W and H/W DVD applications that have been written specifically for the Intel740™ graphics accelerator. PAL is popular in Europe, Australia, and China.

Implication: Users will not be able to use 720x480 and 720X576 in PAL.

Status: See Summary Table Of Changes at the beginning of the document.

18. TV-Out is too wide on some PAL monitors

Problem: When in full screen DOS text mode, several characters on either side of the TV monitor disappear from view. This can be seen when booting up the system or when in a full screen DOS text mode session. It does not appear when playing games. It occurs on the TV monitor (only) and does not occur on the display monitor.

Implication: User may not be able to see the entire video image. For example, in DOS, the prompt will be cut off. Note: both sides (left and right) will be cut, since most DOS text is usually only on the left side, it looks like only the left side is cut.

Status: See Summary Table Of Changes at the beginning of the document.

19. Video overlay is off by a pixel

Problem: Video overlay is off by a pixel when TV-Out is enabled. There will be a magenta line (one pixel) at the bottom of the video overlay window.

Implication: Visual anomaly. Applications using video overlays, such as DVD (hardware or software) and video capture, will have a magenta line at the bottom of the overlay window.

Status: See Summary Table Of Changes at the beginning of the document.

20. Distorted splash screen

Problem: Launching Windows* shows distorted splash screen for a small time (less than 1sec) on PAL TV: When booting up with the TV enabled and booting in PAL mode, the Windows* splash screen becomes distorted (appears diagonally on the screen for less than a second). This occurs about 75% of the time. Also, it occurs just before the end of the OS load cycle, so the Microsoft splash screen is normal for the majority of the boot. When TV-Out is enabled, a distorted splash screen appears for a short time on PAL TVs.

Implication: Visual anomaly. Distorted splash screen, corruption does not stay.

Status: See Summary Table Of Changes at the beginning of the document.

21. Jamming

Problem: On any mode change, half the screen on TV and monitor may black out. Error happens very infrequently. Mode changes may occur from user changing the desktop mode, applications changing modes, or OS changing modes. Adjusting flicker filter will also cause jamming.

Implication: User can only see half the screen when error occurs. User will need to reboot to recover from error.

Status: See Summary Table Of Changes at the beginning of the document.

22. Scrambled screen

Problem: With TV-Out enabled, when the user sets the screen size greater than the video size, the TV screen will become scrambled.

Implication: Visual anomaly. User will not be able to use the TV if the screen size is greater than the video size, for it will be scrambled.

Status: See Summary Table Of Changes at the beginning of the document.

23. Using Intel740™ Graphics Accelerator copy protection "GetMovieMode" returns incorrect result

Problem: The TV-Out driver function "GetMovieMode" returns the wrong value. It always returns "0" (zero), which means copy protection is not enabled, even if copy protection is enabled. This has not seem to be an issue on Zoran or C-Cube DVD players.

Implication: Copy protection will not work correctly for those applications written specifically for the Intel740™ graphics accelerator.

Status: See Summary Table Of Changes at the beginning of the document.

24. Disabling Copy Protection returns error message

Problem: The function "Set TV-OutMode" when used to disable copy protection, copy protection is disabled, but it indicates with an error that the hardware does not support copy protection.

Implication: Copy protection will not work correctly. Not an issue on Zoran or C-Cube DVD players.

Status: See Summary Table Of Changes at the beginning of the document.

25. User must use mouse to adjust

Problem: In display properties, under the TV-Out tab (TV-Out config. applet), the Position controls are not included in the tab order. The user must use the mouse to adjust the TV-Out position controls in the TV-Out properties page.

Status: See Summary Table Of Changes at the beginning of the document.

26. Scrambled DOS full window in TV only configuration

Problem: This issue only occurs when you just have a TV monitor attached (no PC display monitor). If the user goes to a DOS box from Windows* and then goes to a full screen DOS window (by hitting ALT-enter or hitting the full screen icon provided on the tool bar), the screen will become completely scrambled. The corruption will disappear if window size is changed from full screen to windowed mode.

Implication: Visual anomaly. Corruption on the prompt in full screen.

Status: See Summary Table Of Changes at the beginning of the document.

27. WinBench* 98 hangs

Problem: When running WinBench* 98, Business Graphics Winmark, a page fault may occur when the test is run multiple times. This has been observed on Windows* 98 during normal operation, and on Windows* 95 (OSR2.1), only when SoftIce is running.

Implication: User may not be able to run WinBench* 98 due to page fault.

Status: See Summary Table Of Changes at the beginning of the document.

28. Banked mode support

Problem: Not all banked modes are supported by the Intel740™ graphics accelerator drivers/BIOS. If an old DOS application requires a banked mode that is not supported, an error may result. Most likely, the application will not run. Or the application will run regardless, then cause an error.

Implication: Applications that use banked modes may not work correctly.

Status: See Summary Table Of Changes at the beginning of the document.

29. With virtual desktop, TV-Out signal is lost/scrambled

Problem: With TV-Out and virtual desktop enabled (set screen to 800x600; set desktop to 1024x768). From the TV-Out properties page, switch from NTSC to NTSC-J and the signal will cause the TV to black out or scrambled. This is also seen in other screen/desktop resolutions. To recover - disable virtual desktop and re-enable TV-Out.

Implication: TV-Out may not function properly if virtual desktop is enabled.

Status: See Summary Table Of Changes at the beginning of the document.

30. TV garbling during early booting with monitor enabled

Problem: Upon boot-up, corruption can be seen (briefly) on the TV screen. On some motherboards, the TV screen will corrupt the "Energy Star" message screen and subsequent text output screen showing system configuration info.

Implication: Visual anomaly. During system boot-up, the screen may be corrupted.

Status: See Summary Table Of Changes at the beginning of the document.

31. Left/Right position corrupts TV after full-screen DOS box

Problem: On return from a full-screen DOS box, the TV-Out preferences will be set to default state. In this state, pressing either the Left or Right Position controls on the TV-Out Config. Applet causes severe screen corruption on the TV screen. Pressing the Up/Down Position or any other size buttons will restore the original preferences. This appears to only happen in 640x480.

Implication: Visual anomaly. Screen corruption may appear after user returns from full-screen DOS box.

Status: See Summary Table Of Changes at the beginning of the document.

32. TV-Out settings not persistent after monitor wakeup

Problem: The TV-Out position and size settings are not restored properly after the monitor wakes up from its timeout sleep mode.

Implication: User will need to reset settings after monitor wakes up.

Status: See Summary Table Of Changes at the beginning of the document.

33. NEC monitors not listing correct refresh rate selections

Problem: In the "monitor" tab of the "advanced display properties" dialog, some NEC monitors (NEC 4fge and 5fge notably) do not list all refresh rate settings. Only 60hz is available, but the monitor supports other refresh rates.

Implication: Users will not be able to select all of the supported refresh rates.

Status: See Summary Table Of Changes at the beginning of the document.

34. WinBench* 98 hangs when run twice

Problem: Run Business Graphics WinMark in WinBench* 98 the second time, a GPF is generated in the DISPLAY module.

Implication: User can not run WinBench* 98 twice without failure.

Status: See Summary Table Of Changes at the beginning of the document.

35. Disabling Copy Protection returns incorrect message

Problem: The return value of the function "SetTV-OutMode" with zero as the argument to disable CopyProtection, returns error value - "The TV-Out hardware does not support copy protection". The function successfully disables copy protection, but returns an error message.

Implication: Disabling copy protection will return incorrect message.

Status: See Summary Table Of Changes at the beginning of the document.

36. EnumDisplaySettings is EXTREMELY slow

Problem: In the display properties page, the screen resolution slider would take 3-5 seconds to respond to user input. Problem only happened with the PC1.5 drivers and vb220 BIOS.

Implication: Screen resolution slider is slow to respond.

Status: See Summary Table Of Changes at the beginning of the document.

37. Virtual desktop active but does not show in properties

Problem: Enable virtual desktop (screen 800x600; desktop 1024x768) by setting 'standard monitor type' 'super VGA 800x600'. Now change monitor back to the specific brand. Settings page in Display Properties page does not show virtual desktop enabled, but it is still enabled. Reboot does not change that. Changing mode will disable virtual desktop.

Implication: User will not be notified that virtual desktop is activated.

Status: See Summary Table Of Changes at the beginning of the document.

38. Corruption under software cursor in Excel* and Access*

Problem: With software, 3D, or animated cursors enabled in Windows* 98, print previewing a document in MS Access* or MS Excel* shows corruption under the magnifying lens cursor. Same problem happens when you go from unmagnified to magnified. Problem does not happen when using hardware cursors.

Implication: Visual anomaly. Corruption under (software) cursor.

Status: See Summary Table Of Changes at the beginning of the document.

39. Install display adapter software dialog freezes

Problem: During install of localized versions of the drivers, open Display Properties dialog, run setup.exe to install any localized versions. The "Installing Display Adapter Software" dialog will freeze after two blue bars in the "progress" control is shown.

Implication: User will need to Ctrl-Alt-Del to end this task.

Status: See Summary Table Of Changes at the beginning of the document.

40. Andretti Racing mode changes cause corruption

Problem: Install and play Andretti racing. Turn on all options. Qualify, then continue through car setup, then race. Both monitor and TV will become corrupted.

Implication: Visual anomaly. The right 1/5th and bottom 1/5th of the screen become corrupted.

Status: See Summary Table Of Changes at the beginning of the document.

41. TV settings not restored after full-screen DOS box

Problem: Returning from a full-screen DOS box (which initiates a mode change back to the Windows* desktop resolution) does not restore the TV-Out preferences (size and position). Pressing the up/down position or any of the size buttons will restore the original preferences (as they perform a mode change where left/right position do not).

Implication: User will need to reset TV settings, after full-screen DOS box.

Status: See Summary Table Of Changes at the beginning of the document.

42. Bad timing in some modes

Problem: In a PC and TV configuration, running Quake, in VID_MODE 3 and VID_MODE 9 (320x240 & 320x480 respectively) the monitor would show a black screen and the correct video image would occasionally appear and disappear.

Implication: Visual anomaly. TV screen is not stable- video image appears and disappears.

Status: See Summary Table Of Changes at the beginning of the document.

43. Quake 320x480 shows line of corruption

Problem: In DOS-based Quake*, switching to VID_MODE 9 (320x480) will cause an extra character-height row of information to be displayed at the bottom of the screen. The extra row is often colored like the Quake console background, but with intermittent garbage across the row. The rest of the video modes do not display this extra row.

Implication: Visual anomaly. Row of corruption at bottom of screen.

Status: See Summary Table Of Changes at the beginning of the document.

44. With TV-Out enabled, desktop image at 800x600 is too wide for monitor

Problem: When TV-Out is enabled and desktop is set to 800x600 mode. Image is too wide to fit on monitor screen even if monitor H-Size is adjusted to smallest possible value.

Implication: Icons on the extreme left or right may not be visible.

Status: See Summary Table Of Changes at the beginning of the document.

45. Left half of screen flashes black on mode changes

Problem: On a mode change, the left half of the TV screen and monitor flashes black for about 1 second while the system is changing mode.

Implication: Visual anomaly. Left half of screen flashes.

Status: See Summary Table Of Changes at the beginning of the document.

46. Macrovision not available in PAL

Problem: Enabling Macrovision while in PAL mode has no effect.

Implication: Macrovision can not be enabled.

Status: See Summary Table Of Changes at the beginning of the document.

47. WHQL: D3D Texture Colorkey fails

Problem: When the WHQL D3D rasterization test is run, the Texture ColorKey tests fail 96 of 219 tests. It is reporting that the Histogram compare has failed.

Implication: Can't pass WHQL with out this.

Status: See Summary Table Of Changes at the beginning of the document.

48. D3D Chromakey4444pf, Chromakey5551pf, and Chromakey565pf Functional tests fail.

Problem: Chromakey functional test fails, the output should have no red in it.

Implication: Applications using chromakeying may not be displayed properly.

Status: See Summary Table Of Changes at the beginning of the document.

49. Textures lost in Redline Racer* after suspend or Alt-Enter

Problem: If a system suspend or alt-enter occurs during game play, game replay, or demo mode (basically anytime except when you are on a menu screen), when you return to the game all textures and text overlays are gone leaving only white and slightly grey-shaded 3D objects and white rectangles in places where text would appear. (Does not happen in PC1.0)

Implication: Doing an alt-enter or having the system enter a suspend mode if left running in demo/replay mode will cause the visual anomaly and cause a reboot situation.

Status: See Summary Table Of Changes at the beginning of the document.

50. F22 ADF White Screen Bug with Intel740™

Problem: From the main menu, select Quick Combat*. After the mission begins, hit SHIFT-Q and select E. The screen will go white and the system locks.

Implication: Application is bundled with Seattle release and will be seen by customers if not fixed.

Status: See Summary Table Of Changes at the beginning of the document.

51. WHQL: TDDraw Overlay test fails

Problem: TDDraw Overlay test fails case 78.

Implication: Can't pass WHQL.

Status: See Summary Table Of Changes at the beginning of the document.

52. WHQL: VPE and Kernel Test fails

Problem: VPE and Kernel test fails test case 81. In addition to this failure, the following tests also fail: Case 82: VPE_WaitForSync, Case 85: VPE_GetVideoSignalStatus, Case 86: VPE_GetFieldPolarity

Implication: Can't pass WHQL.

Status: See Summary Table Of Changes at the beginning of the document.

53. Preview mode screen corruption after change to & from 8bit

Problem: When going from 16 bit depth to 8 bit depth, an image (image A), containing the live video, twice the size of the video format used, appears on the screen (outside of the capture window) and is continuously refreshed. When the live feed is stopped, dragging the window around over image A still causes a redraw command to occur. Therefore, image A is still there after an erasure unless covered by some other window. Note: When going from 8 bit to 16 bit depth, the image is not twice as big, but rather 2 images half the size are produced.

Implication: Window corruption due to improper video capture handling.

Status: See Summary Table Of Changes at the beginning of the document.

54. WHQL: Constant corruption in 1280x1024x16bbpxOptimal

Problem: Mode 1280x1024x16bpp at optimal refresh rate shows visual corruption.

Implication: This constitutes a WHQL failure.

Status: See Summary Table Of Changes at the beginning of the document.

55. Cannot change refresh rate on SuperMicro/AMI Motherboards

Problem: Cannot change refresh rate on some SuperMicro LX and BX motherboards. The refresh rate is stuck at 56Hz or 60Hz. Also found refresh issues (cannot switch to 85Hz at any resolution) on FIC and Microstar LX boards which also use the AMI system BIOS.

Implication: Limited to 56Hz or 60Hz.

Status: See Summary Table Of Changes at the beginning of the document.

56. Refresh rate "optimal" shows 61.2Hz instead of 84.6 with NEC

Problem: The refresh rate "optimal" did not reflect the true value as ~85Hz but instead ~60Hz at 1152x864x8bpp or 16bpp.

Implication: This causes screen flickering if switching to optimal refresh rate.

Status: See Summary Table Of Changes at the beginning of the document.

57. WHQL: Skiing.avi with overfly.exe crashes

Problem: Running WHQL DCT skiing.avi with overfly.exe, the system crashes when skiing.avi switches itself to full screen.

Implication: Can't pass WHQL and need to do a hard boot to recover system.

Status: See Summary Table Of Changes at the beginning of the document.

58. Alt-tab during Kinesub* causes bad textures

Problem: Pressing Alt-tab in any D3D application and then restoring it causes some textures to be missing or corrupt because they are not reloaded after an Alt-tab or a Suspend or a Full Screen DOS prompt.

Implication: This affects any D3D application which uses textures.

Status: See Summary Table Of Changes at the beginning of the document.

59. The refresh rate "optimal" is not stable with Windows* 95, 98

Problem: The refresh rate "optimal" shows flickering screen, like setting "adapter default" (or other low rates such as 56Hz or 60Hz), with Windows* 95 and Memphis 1998.6, resolutions from 800x600 or up.

Implication: Can not obtain an “optimal” refresh rate that is ergonomically correct.

Status: See Summary Table Of Changes at the beginning of the document.

60. Version tab missing

Problem: Under Display Properties, the Version tab is missing (for Windows* 95 OSR2.1).

Implication: User will not be able to see version tab information- display driver, version, chip manufacture, Video BIOS version, memory size, etc.

Status: See Summary Table Of Changes at the beginning of the document.

61. Codec incorrectly loaded with driver

Problem: Loading the 2.0a driver on a drive that has already an Intel740™ driver, the operating system warns the user that he is loading an older version of the Indeo codec.

A) if the user answers yes, (keep the copy of the codec he already have), he will be able to use vidcap32.exe to see video preview and the compression option in vidcap will show the codec.

B) If user says no, i.e load the indeo codec, he will NOT see video preview AND the compression option in vidcap will NOT show the codec.

Implication: Codec not loaded properly.

Status: See Summary Table Of Changes at the beginning of the document.

62. Incorrect name for the video display dialog box

Problem: Video capture applications (i.e. vidcap32.exe) display incorrect name for the video display dialog box. The “video display...” command brings up a dialog box titled "Video Monitor". The correct title should be “Video Display.”

Implication: Incorrect title for dialog box.

Status: See Summary Table Of Changes at the beginning of the document.

63. Changing to 1600x1200x8bpp with preview video crashes application

Problem: Changing resolution to 1600x1200x8bpp with preview video crashes application (i.e. vidcap32.exe) due to illegal operation.

Implication: Changing resolution to 1600x1200x8bpp will cause crash. Note: overlay is not supported in 1600x1200 resolutions.

Status: See Summary Table Of Changes at the beginning of the document.

64. Unable to select full size (1:1)

Problem: Unable to get full size format for Vidcap32 in PAL, PAL-N, SECAM.

Implication: Full size not available.

Status: See Summary Table Of Changes at the beginning of the document.

65. Cancel button does function properly for video display

Problem: In some video capture applications (i.e. vidcap32.exe), clicking on the cancel button in option->video display, the values are reentered for brightness, hue etc. These values are always the same for the cancel button and are not the values previously entered.

Implication: Clicking on “Cancel” will not restore the previous settings but some default setting.

Status: See Summary Table Of Changes at the beginning of the document.

66. **Brightness button not working properly for video display**

Problem: Brightness button does not function properly in video capture applications (i.e. vidcap32.exe). Negative numbers can not be entered into the edit box although the slider shows that the values are “-128 < v < 127”. If the slider is used to set the brightness to a negative number, upon returning to the video display dialogue box, the display value (edit box and slider) will be 127.

Implication: After changing brightness to a negative value, reopening the video display, the brightness box will report a positive value of 127.

Status: See Summary Table Of Changes at the beginning of the document.

67. **Win98 Screen Saver Corruption**

Problem: Vertical striped lines appear across the center of the screen while running the “Space” (space.scr) screen saver in Windows* 98. The problem is only observed in 24-bit color mode. This issue is not observed on the Intel740™ chip CRB using the same drivers and BIOS.

Implication: Visual anomaly. Corruption may be seen on some Intel740™ graphics accelerator based cards when “Space” screen saver is running.

Status: See Summary Table Of Changes at the beginning of the document.

68. **TV and PC monitor black screens after clicking PAL button or after mode changes**

Problem: In Win95 only, in PAL mode, the following procedures will produce black screens on both the TV and PC monitor:

- 1) Opening the TV-Out Config applet and click on the PAL radio button in the Video Format option group.
- 2) Random mode changes. When these occur, another mode change will clear the black screens, however this is difficult to accomplish while no displays are active.

Implication: TV and PC may black out.

Status: See Summary Table Of Changes at the beginning of the document.

69. **TV-Out persistence application starts too late**

Problem: After setting the TV out parameters and then rebooting, the last TV-Out settings take several seconds to load after system reboot.

Implication: TV-Out settings takes a few seconds to take effect.

Status: See Summary Table Of Changes at the beginning of the document.

70. **MacroVision not persistent**

Problem: MacroVision is not persistent after disabling TV-Out. Macrovision will not function properly after TV-Out has been disabled.

Implication: Copy protection (MacroVison) may fail.

Status: See Summary Table Of Changes at the beginning of the document.

71. **Switching TV-Out settings several times causes crashes**

Problem: Switching several times between NTSC and NTSC-J or enabling and disabling TV-Out crashes the system. The screen goes black. Must reboot to recover. Issue occurs more often with several applications running. Even more with virtual desktop enabled.

Implication: Switching settings may cause system crash. Must reboot to recover.

Status: See Summary Table Of Changes at the beginning of the document.

72. TV-Out size buttons do not gray at extremes

Problem: The size buttons have no effect when the size extremes are reached, but the buttons are not grayed (disabled). The position buttons are grayed at the extremes.

Implication: User interface is not consistent.

Status: See Summary Table Of Changes at the beginning of the document.

73. 3D pipes screen saver draws over password box

Problem: In 16 bpp mode, the pipes in 3D pipes screens saver, with password protected enabled, will draw over the password dialogue box.

Implication: Password box gets covered by the 3D pipes.

Status: See Summary Table Of Changes at the beginning of the document.

74. Exiting OpenGL plug-ins causes Invalid Page Fault

Problem: Exiting Internet Explorer 4.0 or Netscape 4.0 while viewing a page using Cosmo Player plug-in with Intel740™ graphics accelerator OpenGL renderer selected causes Invalid Page Fault in module unknown error.

Implication: Invalid page fault error occurs.

Status: See Summary Table Of Changes at the beginning of the document.

75. Realimation causes an invalid page fault

Problem: Run View.exe by dragging Dragon.rbs on top of it. Select OpenGL from the 3D_API Menu. You will observe an invalid page fault.

Implication: Running Realimation results in an invalid page fault.

Status: See Summary Table Of Changes at the beginning of the document.

76. OpenGL Z-buffer incorrect in Lightwave 3D and Dir 3D

Problem: The Z-buffer appears to be incorrect in Lightwave 3D and Dir 3D.

Problem: In Lightwave modeler, load an object such as the triceratops in the animals directory. Rotate the object in the OpenGL preview window and you will be able to see the animal's feet through his back.
Issue only seen in driver 2.0a. Newer versions will not have this problem.

Implication: Improper rendering.

Status: See Summary Table Of Changes at the beginning of the document.

77. Total AGP memory reported greater than AGP aperture size

Problem: GetAvailableVidMem() reports 19MB Total AGP Memory Size when aperture is only 4MB. Total AGP memory cannot be greater than AGP aperture size.

Implication: An application could report that there is more AGP memory available than the amount set by the system BIOS setting. This does not cause any adverse effect to the system.

Status: See Summary Table Of Changes at the beginning of the document.

78. No live video nor closed caption when switching back to TV and browser

Problem: When running InterCast in modes 640x480x8,16,24bpp with TV and browser, switching to TV only then back to TV and browser will lose the video and closed caption.

Implication: Video and closed caption is lost when switching back to TV and browser.

Status: See Summary Table Of Changes at the beginning of the document.

79. Belt from Local to AGP is missing a clear dependency call

Problem: Doing a belt from local memory to an AGP texture is not correctly clearing out the command buffers. The problem that can occur is that the Intel740™ chip can be rendering when a belt is called - the belt will start copying over that texture (that is being used by the renderer on the Intel740™ chip). And corruption can be seen.

Implication: Graphic problems can occur for games using this type of belt.

Status: See Summary Table Of Changes at the beginning of the document.

80. WHQL: DCT GDI Rate Test Fails

Problem: The DCT test fails the Rate test under the GDI tab of tests.

Implication: Can not pass WHQL with this failure.

Status: See Summary Table Of Changes at the beginning of the document.

81. WHQL: DCT PC98 downloaded RAMDAC not detected

Problem: When running the DCT tests for WHQL the PC98 test "PC98 Downloadable RAMDAC" capability is not detected.

Implication: Can not pass WHQL with this failure.

Status: See Summary Table Of Changes at the beginning of the document.

82. WHQL: Version numbers for TV-Out file inconsistent for 9x and NT

Problem: TV-Out files, gfxTVout.dll and TVwatch.exe, have different version numbers for Win 9x and Win NT. They need to be consistent.

Implication: Can not pass WHQL with this inconsistency.

Status: See Summary Table Of Changes at the beginning of the document.

83. WHQL: Version numbers nonexistent for gfxmulti.dll

Problem: gfxmulti.dll needs to have version numbers assigned.

Implication: No version numbers assigned to gfxmulti.dll.

Status: See Summary Table Of Changes at the beginning of the document.

84. Cannot restart Forsaken after playing 1024x768 mode

Problem: After installing forsaken, launch game and select "generic 3D" (because Intel740™ graphics accelerator is not one of ~10 listed). Game runs and plays fine at 800x600 and 1024x768, however, if you exit the game completely after running in 1024x768 mode, you cannot restart the game. It freezes the mouse after you select "generic 3D". You can unfreeze the mouse by doing a ctrl-alt-delete, but the ONLY way to recover and run the game in HW mode is to select a different HW accelerate and switch to a resolution lower than 1024x768, then exit and restart selecting generic 3D.

Implication: Can not restart game.

Status: See Summary Table Of Changes at the beginning of the document.

85. WHQL: GDI w/Poly Clip fails on Win95 only

Problem: GDI w/poly clip fails under the Window-GDI tab of the WHQL DCT suite on OSR2.1 only.

Implication: None. Test required for Windows* 98, not Windows* 95 OSR2.1.

Status: See Summary Table Of Changes at the beginning of the document.

86. WHQL: Video Mem Management Test Fails

Problem: WHQL Video Memory Management Test case 14 fails.
Run 'Video Memory Management Tests' under the DirectDraw tab of the WHQL PC98 Beta CD.

Implication: Can not pass WHQL with this failure.

Status: See Summary Table Of Changes at the beginning of the document.

87. WHQL: Multi Monitor partially implemented on non existing feature

Problem: Failure on WHQL submission. The Multi monitor feature wasn't supposed to be implemented. We exposed the feature with a stub and an entry in the gfx.inf file where the drv2 parameter was loaded into the registry. This tells Windows* 98 that we are claiming to support Multi Monitor.

Implication: The operating system displays messages indicating the driver should be running and is failing.

Status: See Summary Table Of Changes at the beginning of the document.

88. WHQL: Digital Signature Entries need to be put in INF files

Problem: In a continuing effort to promote and advance the quality of drivers, Microsoft* will digitally sign Windows* 98 and Windows* NT 5.0 drivers that pass WHQL testing. Drivers will be digitally signed if they ship with the Windows* 98 or Windows* NT 5.0 operating systems or are available for download on the Hardware Compatibility List (HCL). Two sections of the .INF files must be modified to support the Digital Signature compatibility.

Implication: May prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

89. WHQL: Surface Flipping Test Failure Possible

Problem: WHQL DCT TDDRAW case 77 SURF_GetFlipStatus may occasionally fail (observed twice out of roughly 50 runs).

Implication: May prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

90. WHQL: Case Video Stream reset case #18 hangs the system

Problem: While running the PC98 WHQL vcap test, the system hangs and will not respond to control-alt-delete. The system has to be hard rebooted.

Implication: May prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

91. WHQL: DCT Font Test hangs in all modes with Windows* 95 OSR2.1

Problem: While running the PC98 WHQL Font test, it hangs in all modes with OSR2.1.

Implication: May prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

92. WHQL: Disptest fails “Pixel disappears”

Problem: While running the PC98 WHQL Disptest in any 16 bit mode, a notch in the lower left corner of the upper left text area.

Implication: May prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

93. WHQL: Codecs not installed on clean system

Problem: The Run Time Encoder (RTE) files are not installed as a part of the installation.

Implication: May prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

94. WHQL: “Multi-Monitor” 15.4.5 Failure

Problem: There is screen corruption on the secondary adapter at the bottom of the window when opening up any window and dragging it back and forth between monitors for Multi-Monitor support.

Implication: May prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

95. WHQL: DOS window corrupted when opened to full screen

Problem: In Win95 and Win98 with a TV attached (TV-out), if a DOS box is switched from windowed to full-screen mode, the full-screen version will be corrupted until a key is pressed. Once any key is pressed, the DOS screen will be restored and function properly thereafter.

Implication: Open full-screen DOS while using TV-Out.

Status: See Summary Table Of Changes at the beginning of the document.

96. WHQL: VXD File Version string shows N/A in Fileview.exe

Problem: When using Fileview.exe to verify the version information for the driver files, the File Version String for Gfx.vxd shows N/A.

Implication: May cause WHQL failure.

Status: See Summary Table Of Changes at the beginning of the document.

97. WHQL: 3D Pipes screen saver with Display properties page is corrupt

Problem: Black horizontal lines are present with the pipes screen saver when changing resolutions back and fourth between different 24 bit modes. Go to the Display properties page, click the “screen savers” tab and choose 3dpipes. Use the display properties icon to change the resolution back and fourth between different 24 bit modes.

Implication: User may see corruption.

Status: See Summary Table Of Changes at the beginning of the document.

98. WHQL DCT Test fails ESI/EDI

Problem: Under the PC98 WHQL DCT VFM performance test ESI/EDI failures are present with Win95.

Implication: Run the WHQL DCT VFM performance test and check ESI/EDI result log for failures.

Status: See Summary Table Of Changes at the beginning of the document.

99. WHQL: VFW AVI test causes cursor corruption

Problem: The BIOS or DOS application itself is overwriting the cursor data. Since the driver should not assume any location in Vram and is preserved from mode switches, it is the driver's responsibility to preserve context and state. This issue does not come up with typical mode changes (640x480x8bpp mode ONLY), because the cursor is always reloaded with new data there.

Implication: May prevent WHQL Certification.

Status: See Summary Table Of Change at the beginning of the document.

100. WHQL: Winbench test fails in 1600x1200x8bpp

Problem: The system locks and gives an illegal instruction error when winbench Video/Action Indeo 160x120 30FPS zoomed = True is run. Set system to 1600x1200x8bpp, edit the whql WHQL97.zds file by commenting out everything except "Video/Action, Indeo, 160x120, 30fps, 300db/s, Zoomed=True" and launch winbench.

Implication: May Prevent WHQL Certification.

Status: See Summary Table Of Change at the beginning of the document.

101. WHQL: "Nature" screen saver is corrupted

Problem: The background behind the leaves within the "Nature" screen saver is corrupted.

Implication: Set display mode to 1024x768x16bpp, run 3D Winbench without a CD disk, load the WHQL97.zds suite (This will not run anyway because it needs WinStone.), try to run it, minimize Winbench, go to "display properties", click the screen saver tab and preview the "Nature" screen saver.

Status: See Summary Table Of Change at the beginning of the document.

102. WHQL: Vcaptest 12 Fails (videostreamfini)

Problem: The vcaptest does a test where it asks the driver to finish streaming on an already finished stream. The driver needs the code to check if streaming is going on or not. Run the WHQL test vcaptest.exe and load the profile.pro file. Then run test 12, videostreamfini.

Implication: May Prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

103. WHQL: Running vcaptest crashes

Problem: Running the WHQL test vcaptest.exe and loading the profile.pro file will sometimes give a blue screen. Run the WHQL test vcaptest.exe and load the profile.pro file.

Implication: May Prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

104. WHQL: Vcaptest gets an invalid page fault

Problem: An invalid page fault error occurs after running vcaptest.exe. Run the WHQL test vcaptest.exe and run the automatic test. The test causes an invalid page fault (MMtask causes an invalid page fault in gfxvfw32).

Implication: May Prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

105. WHQL: Disptest fails 640x480x16bpp on mode 4

Problem: Under the PC98 WHQL DCT the Disptest fails 640x480x16bpp on mode 4. Run Disptest.exe and toggle to mode 4.

Implication: May Prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

106. WHQL: Non-Overlay AVI in full-screen is corrupted

Problem: While running two avi files and putting the avi file without the overlay into full screen mode (alt-enter), the non-overlay avi file is corrupted. Run any two avi files and put them in continuous repeat mode. The second avi file (the one without the overlay) when put into full-screen mode (alt-enter) is corrupted.

Implication: May Prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

107. WHQL: gfx.inf has reboot command

Problem: The gfx.inf should not have a reboot command. Look at the gfx.inf and search for reboot command.

Implication: May Prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

108. WHQL: TDDLong case 50 hangs

Problem: WHQL TDDLong bltfast case 50 hangs in 12x10x16bpp. Run the WHQL TDDLong bltfast case 50 at 12x10x16 mode.

Implication: May Prevent WHQL Certification.

Status: See Summary Table Of Changes at the beginning of the document.

109. WHQL: Multi-Monitor does not work as a Primary Monitor

Problem: The initial test environment provided for testing the Intel740™ graphics accelerator as a secondary adapter. This was a system BIOS limitation. Now system BIOS are implemented to support an AGP card as a Primary adapter. The Intel740 chip now needs to work as a Primary adapter.

Implication: Motherboards systems with new system BIOSs...

Status: See Summary Table Of Changes at the beginning of the document.

ERRATA (Windows* NT 4.0)

1. OpenGL screen saver causes system failure

Problem: The Intel740™ graphics accelerator display driver, in response to an OpenGL application request, generates a pointer to a flag that is used to indicate that the primary surface has pending OpenGL operations to perform. This pointer, when an OpenGL application is running, may be initialized incorrectly (points to the wrong address). This erratum has been seen to manifest itself in the following way: when using an OpenGL screen saver, while an OpenGL application is running in the background, the system may hang. Specifically, during the time the screen saver is active, if normal operation is requested by either moving the mouse or hitting a key on the keyboard, the system may hang. The frequency of system hangs is indeterminate, and depends on the specific OpenGL screen saver selected and the OpenGL application running in the background.

Implication: A system failure may occur if two or more OpenGL applications are running simultaneously, or a single OpenGL application is running in a window (windowed mode) and the window is moved across the screen. The system must be reset to continue normal operation.

Status: See Summary Table Of Changes at the beginning of the document.

2. Booting Windows* NT 4.0 In VGA mode causes a blue screen

Problem: The Intel740™ graphics accelerator MiniPort driver is not initializing the pointer to shared memory correctly. Shared memory is used in the MiniPort environment to store global information (e.g. display mode information) for driver use. This issue will manifest itself in the following way: when loading the standard Windows* NT 4.0 VGA drivers after the Intel740™ drivers are already loaded, a blue screen may appear just prior to when the NT desktop would normally become visible. Along with the blue screen, is an error message stating the following: "IRQL_NOT_LESS_OR_EQUAL". The frequency of failure of this erratum is indeterminate.

Implication: A system hang may occur when loading the standard NT VGA drivers after the Intel740™ drivers. The system must be reset to continue operation.

Status: See Summary Table Of Changes at the beginning of the document.

3. Multiprocessor support

Problem: The Intel740™ graphics accelerator drivers do not function properly in a multiprocessor environment. In systems with two or more processors, or a single processor environment that runs with a multiprocessor, Windows* NT 4.0 kernel, will not run correctly when used in conjunction with the Intel740™ drivers. Results will be unpredictable. Drivers will load, but system may become unresponsive to keyboard and mouse inputs, and eventually will hang.

Implication: No multiprocessor support in a Windows* NT 4.0 environment

Status: See Summary Table Of Changes at the beginning of the document.

4. TV-Out support

Problem: The Intel740™ graphics accelerator drivers do not support TV-Out. The TV-Out portion of the code has not been enabled in the drivers.

Implication: No support for TV-Out applications.

Status: See Summary Table Of Changes at the beginning of the document.

5. Video for Windows* (VFW) support

Problem: VFW applications are not supported. This includes all video for Windows* (VFW) Video Capture, TV-In, intercast, and video conferencing type applications.

Implication: No support for VFW applications.

Status: See Summary Table Of Changes at the beginning of the document.

6. Overlay corruption on mode change to 1600x1200

Problem: On a mode change from a resolution setting of less than 1600x1200 to 1600x1200 when there is an overlay present, the overlay becomes corrupted after the mode change. Overlays are not supported in 1600x1200 modes.

Implication: Objects used as an overlay may become corrupted when changing mode to 1600x1200 mode.

Status: See Summary Table Of Changes at the beginning of the document.

7. Testing modes multiple times in VGA mode

Problem: Testing modes multiple times may cause the system to crash and leave a blank screen. In the display properties page (settings tab), 'test' several display modes in a row and the test fails.

Implication: Multiple mode tests will crash the system. To recover, the user will have to reboot.

Status: See Summary Table Of Changes at the beginning of the document.

8. Mode preview test screen shows corruption

Problem: Start in 1024x768x16 bpp mode. Do a 'test' in the settings page of the display properties. During the 5 second preview test mode screen, a line appears in the green area.

Implication: Corruption on preview screen when animated icons are running.

Status: See Summary Table Of Changes at the beginning of the document.

9. Cannot change modes if running SoftICE

Problem: While SoftICE is running and the user tries to change resolutions, it will result in a kernel level error. This is a Blue Screen type error. This does not occur if SoftICE is not running.

Implication: User may not be able to change resolutions while running SoftICE without getting an error.

Status: See Summary Table Of Changes at the beginning of the document.

10. F/A 18 Korea has black square cursor overlay

Problem: Using the mouse to maneuver the plane - there will be a black box at the center of the screen. This error only occurs in the default game mode of 640x480. This error only happens during the training missions, it does not happen during the actual game.

Implication: Visual anomaly. Cursor does not properly show up, instead the cursor is a black square.

Status: See Summary Table Of Changes at the beginning of the document.

11. Animated cursors decreases WinTune97 video performance

Problem: WinTune97 video performance dramatically declines when animated cursors are enabled.

Implication: Decreased performance when animated cursors are enabled.

Status: See Summary Table Of Changes at the beginning of the document.

12. Macrovision not available in PAL

Problem: Enabling Macrovision while in PAL mode has no effect.

Implication: Macrovision can not be enabled.

Status: See Summary Table Of Changes at the beginning of the document.

13. Flipping thru size extents always causes loss of output

Problem: In PAL mode, flipping through all of TV-Out size settings will cause the PC and TV to output a black screen. This appears to happen at the same place each time (choosing the same overscan setting). It does NOT happen at 800x600, only 640x480. Once in the "black screen" mode, successive size adjustments will NOT restore the screen, but a mode change will restore the screen.

Implication: Flipping through the TV-Out size settings will cause the TV and PC monitor to turn black.

Status: See Summary Table Of Changes at the beginning of the document.

14. MacroVision ownership not enforced

Problem: The application which enables MacroVision should be the only one which can disable it. Under Windows* NT 4.0 multi-processor or uni-processor systems, this is not the case.

Implication: More than one application can enable and disable MacroVision at a time.

Status: See Summary Table Of Changes at the beginning of the document.

15. BIOS information in Windows* NT 4.0 property page anomalous

Problem: In the Adapter Information block, the BIOS Information field says: "ted VGA BIOS" (Go to: Display Properties/Settings/Display Type.)

Implication: Incorrect information displayed in properties page. This will happen if you run an older NT driver with the newer BIOS's.

Status: See Summary Table Of Changes at the beginning of the document.

16. Video overlay is off by a pixel

Problem: While running a video capture application with TV-Out enabled, a pink line (about 1 pixel high) is visible.

Implication: Visual anomaly. Pink line can be seen in video window when TV-Out is enabled.

Status: See Summary Table Of Changes at the beginning of the document.

17. Windows* NT 4.0 logon seemingly hangs with 16MB RAM

Problem: Windows* NT 4.0 has a documented minimum memory requirement of 16MBs, but our driver has a 4+ MB footprint (AGP command buffer, etc.,) thus chopping the effective system memory to 12MB.

The system is in a state of limbo, there isn't enough memory to continue logging in the user, but it does have enough to display to Ctrl-Alt-Del panel when called. Realistically, the minimum configuration with our board and drivers should be 32MB, and at that, performance will be very poor when OpenGL applications run (textures are stored in AGP memory).

Implication: Minimum system memory requirement is greater than 16MB due to AGP requirements.

Status: See Summary Table Of Changes at the beginning of the document.

18. Driver fails on GX-based systems

Problem: The Intel740™ drivers will not load properly on a system with the Intel® GX AGPset and a Slot-2.

Implication: Systems with Intel® 440GX AGPset will not load the Intel740™ graphics accelerator properly.

Status: See Summary Table Of Changes at the beginning of the document.

19. Left-clipping of glyphs exploits HW bug

- The conditions under which the defects manifest are as follows:
Left clipping of glyph
Total glyph size is larger than one qword
Each scanline (of the glyph) is 3 or less pixels (after clipping)
Enable HW acceleration, run WHQL tests, observe errors.

Implication: Can't pass WHQL.

Status: See Summary Table Of Changes at the beginning of the document.

20. Invalid resolutions selectable

Problem: All resolutions are listed as available, even if the Video BIOS reports that they are not, as is the case in a TV-Only (TV-Out) configuration. The miniport driver must check the validity of each mode it makes available.

Implication: Unsupported resolutions are listed.

Status: See Summary Table Of Changes at the beginning of the document.

21. Corruption at bottom of screen in Pandemonium*

Problem: Install large install of Pandemonium*. Choose Hide Desktop, 800x600, thousands of colors. Make sure to choose Performance under Options and set to smooth and high. At the beginning of the first and second levels, as well as at random places in the middle of level, corruption can be seen at bottom third of screen. Corruption can also be seen by pressing escape, then choosing Resume.

Implication: Visual anomalies and hindrance to gameplay.

Status: See Summary Table Of Changes at the beginning of the document.

22. Cannot change refresh rate on SuperMicro/AMI Motherboards

Problem: Cannot change refresh rate on some SuperMicro LX and BX motherboards. The refresh rate is stuck at 56Hz or 60Hz. Also found refresh issues (cannot switch to 85Hz at any resolution) on FIC and Microstar LX boards which also use the AMI system BIOS.

Implication: Limited to 56Hz or 60Hz.

Status: See Summary Table Of Changes at the beginning of the document.

23. Blue screen occurs when OGL screen saver executes

Problem: Enable an OpenGL screensaver and set it to 1 minute delay. After launching videoset.exe and choosing 'Set all modes' from the menu, letting the screen saver activate results in a KMODE_EXCEPTION_NOT_HANDLED error.

Implication: Blue screen error occurs when OGL screen saver executes while videoset.exe is running. Sometimes this requires a reboot.

Status: See Summary Table Of Changes at the beginning of the document.

24. UpdateOverlay and Flip do not set the buffer pointer's fourth address byte, MR50

Problem: UpdateOverlay and Flip do not set the buffer pointer's fourth address byte, MR50.

Implication: Applications that use overlay will have a corrupted image.

Status: See Summary Table Of Changes at the beginning of the document.

25. WHQL: Random create/release surfaces 100x fails on 4megs

Problem: Using a 4 mb Intel740™ graphics accelerator card, test case 13 from WHQL's TDDRAW.exe is out of video memory (when in resolution 1280x1024x16) and CreateSurface() unexpectedly fails.

Implication: Can't pass WHQL.

Status: See Summary Table Of Changes at the beginning of the document.

26. Sys drivers give fail to load error with 3rd party card

Problem: Putting in a 3rd party video card and boot up (not in VGA mode) will cause errors at start-up. The errors indicate that gfxi2c and gfxvfw failed to load.

Implication: According to WHQL rules, this shouldn't happen and the drivers should quietly not even attempt to load.

Status: See Summary Table Of Changes at the beginning of the document.

27. Clicking on ULEAD capture window causes it to freeze

Problem: In ULEAD Mediastudio Pro video capture application, clicking on capture window causes it to freeze and use wrong colors.

Implication: Application freezes video. Requires quitting and relaunch of application.

Status: See Summary Table Of Changes at the beginning of the document.

28. S-video input choice not persistent after screen saver pops activates

Problem: Launch vidcap32.exe and choose the s-video input. After the screen saver activates, stop it. The video will be lost because the driver has changed the input from S-video to composite.

Implication: User will need to reselect S-video if screen saver is activated.

Status: See Summary Table Of Changes at the beginning of the document.

29. Video driver name displayed is incorrect

Problem: In vidcap32.exe, click on options and notice the name of the video driver enumerated by the application. The name listed is "gfxvfw32.dll, version 1.0.4.0" It should be "Intelaccelerator capture driver, version 1.0.4.0"

Implication: Improper labeling of capture device.

Status: See Summary Table Of Changes at the beginning of the document.

30. Brightness setting not persistent

Problem: The brightness setting is not persistent across the relaunch of a video application. If the brightness is changed while running the application and the application is relaunched, the default brightness value will be restored. All other Video Display settings are correctly persistent.

Implication: User will need to reset brightness settings everytime they restart the video application.

Status: See Summary Table Of Changes at the beginning of the document.

31. Saved TV standard PAL_N shows problems at the next launch of

Problem: Launch vidcap32.exe and set the video source TV standard to PAL_N. Close the application. relaunch vidcap32.exe. The application should get back the settings that the driver has saved at the last use.(i.e PAL_N tv standard). The video overlay shows at the same size as shown on the previous use of vidcap32 (i.e set for a PAL signal) BUT the image has a dark zone at the bottom. Checking video source shows that the TV standard is NTSC.

Implication: User has to choose another video format to have the driver reset the video size and update the overlay. Also, choosing another video source TV standard will force the driver to reset the size and update the overlay.

Status: See Summary Table Of Changes at the beginning of the document.

32. Video application terminated when full DOS window pops up

Problem: With desktop resolution set to 1024x768x16x75, launch vidcap32.exe and show video on overlay. Launch a DOS box and make it full screen (with alt-enter). The full DOS box is not able to open and the driver shows the following message "desktop resolution is too high for video capture click ok to exit application" the application is thus terminated.

Implication: Opening a full screen DOS box will cause video application to terminate.

Status: See Summary Table Of Changes at the beginning of the document.

33. Screen corruption for PointCast full screen application

Problem: Launch vidcap32.exe and do show neither overlay nor preview. (both buttons should be not pressed). let the PointCast application go fullscreen or use the view/show smartscreen to do that. Some of the bitmaps of the PointCast application will show corruption. the stock ticker will show same.

Implication: Visual anomaly. Corruption in application.

Status: See Summary Table Of Changes at the beginning of the document.

34. gfixi2c.sys does not load under a certain hal.dll

Problem: The gfixi2c.sys driver will not load properly if the APIC Hardware Abstraction Layer (hal.dll) is installed. NT Service Pack 4 is required in order to use this HAL.

Implication: If user has an multi-processor system, service pack 4 is required to use VFW and TV-Out features.

Status: See Summary Table Of Changes at the beginning of the document.

35. Left/Right position buttons not updated after format change

Problem: The Size and Position of each Video Format (NTSC, NTSC-J, PAL) and each resolution are saved separately (i.e. the size and position of NTSC 640x480 is independent of NTSC-J 800x600).

Implication: User interface not updated correctly.

Status: See Summary Table Of Changes at the beginning of the document.

36. All controls should gray when TV-Out is disabled

Problem: When TV-Out is disabled (PC Only config, or PC+TV with TV-Out disabled, or PC+TV in non-TV-Out resolution) the Position and Size controls are currently disabled. The rest of the controls (Video Format, Flicker Filter, and Brightness) should also be disabled.

Implication: Inconsistent user interface.

Status: See Summary Table Of Changes at the beginning of the document.

37. Keyboard locked out at position extremes

Problem: The keyboard can be used to set the TV- Out position (i.e. using TAB to select a position arrow and SPACEBAR to press the arrow). However, when an extreme is reached the arrow control is disabled (grayed). Since the button had focus when it was disabled, the focus is permanently locked out. This not only means the user cannot move to any other controls, but also the default ENTER and ESC key actions are disabled as well.

Implication: A keyboard-only user would be locked out of the Config Applet.

Status: Currently there are not buttons in PC3.0. See Summary Table Of Changes at the beginning of the document.

38. Enabling and disabling TV-Out in PAL causes split or no output

Problem: While in PAL mode, disabling and enabling TV-Out frequently causes split-screen or no TV output. Performing simple mode changes (such as a resolution change or a full-screen DOS box) will not restore the screen. Successive disabling and enabling of TV-Out will restore the screen.

Implication: Visual anomaly. Split screen or no output to TV may result from enabling and disabling TV-Out.

Status: See Summary Table Of Changes at the beginning of the document.

39. AVI's and Foxbear corrupt alt-tab app box

Problem: Running multiple AVI's (3 or more) and Foxbear and continuously press Alt-Tab, the AVI's or Foxbear show through into Alt-Tab App box.

Implication: Visual anomaly. Corruption in Alt-Tab Box.

Status: See Summary Table Of Changes at the beginning of the document.

40. WHQL Tddraw test case 13 fails with surface corrupt

Problem: The TDdraw test fails in many modes (listed below):

13: Random Create/Release 100x

List of modes where the bug occurs:

* all modes less than 640x480

* 640x480, 75 Hz

* 800x600, 75 Hz

* 1024x768, 75 Hz

* 1152x864, 75 Hz

Implication: Test failure.

Status: See Summary Table Of Changes at the beginning of the document.

41. Videset "Show 1 font" Set mode causes blue screen error

Problem: KMODE_EXCEPTION_NOT_HANDLED blue screen error occurs in the gfx40.dll driver when running WHQL's videset.exe (in GDI, check "show 1 font"; in Tests menu, choose "Set one mode"). In approximately 10-20 seconds, a blue screen error will occur.

Implication: Fails videset.exe test (a test in WHQL), but this test is NOT required for WHQL certificaion.

Status: See Summary Table Of Changes at the beginning of the document.

42. NT4.0 Install Blue Screen with 64MB SDRAM

Problem: After preloading the CDROM to perform a full rebuild of the system hard drive and the hard drive is booted from, the NT setup program begins. As part of the setup, the user is prompted to select

networking protocols. If TCP/IP is selected as one of two or more protocols, the system blue screens immediately after the user selects the time zone (time zone/region selection is part of the setup process).

Implication: System encounters a blue screen error with 64MB of SDRAM.

Status: See Summary Table Of Changes at the beginning of the document.

43. Driver Reports wrong version number in Property pages

Problem: The Intel740™ chip WHQL NT 980829 driver reports its version number as 980824 on the DISPLAY TYPE page of the Display Properties window. From a user standpoint, this is confusing. A user will install the 980829 driver and be informed he/she is running 980824.

Implication: Potentially WHQL failure.

Status: See Summary Of Changes at the beginning of the document.

44. OGL Evaluators test fails

Problem: While running the OGL test suite test case 262 (1D and 2D evaluators on OGL), the grid lines in the lower left corner appear as diagonal lines instead of vertical and horizontal lines. This results in a test failure. WHQL OGL test case 262 failure.

Implication: May cause WHQL failures.

Status: See Summary Of Changes at the beginning of the document.

45. The INF file for NT is broken under NT5.0

Problem: The [gfx40.Services] section of the INF file has an error.

Implication: Intel740™ graphics accelerator cards will not function on non-upgraded NT5.0 systems.

Status: See Summary Of Changes at the beginning of the document.

ITR:

ERRATA (Video BIOS)

1. Low resolution modes are being set to wrong refresh rate

Problem: The Intel740™ graphics accelerator video BIOS is setting the following low resolution modes to 60Hz when they should be set to 70Hz:.

320x200x8(256 colors), 320x200x16(64K colors), 320x200x24(16M colors)

400x300x8(256 colors), 400x300x16(65K colors), 400x300x24(16M colors)

512x384xx(256 colors), 512x384x16(64K colors), 512x384x24(16M colors)

A call to function EnumDisplayModes() returns the correct setting (70Hz), however, the video BIOS is actually setting the modes to 60Hz. This function is used to determine which modes are supported.

Implication: The refresh rates for the above modes will be set to 60Hz, when 70Hz is requested.

Status: See Summary Table Of Changes at the beginning of the document.

2. Display Data Channel not detected on some monitors

Problem: The video BIOS waits a determined amount of time when detecting whether a monitor supports DDC. This delay has been determined to be too great for some older monitors. In this case, some DDC capable display monitors will not be detected properly by the operating system. This is because DDC can not be detected. This has been observed on a limited number of older display monitors.

Implication: Since DDC is not detected, the monitor plug-n-play feature will not function properly, and the operating system will not be able to detect the monitor type. In this case, the user will have to manually set the monitor type through the Windows* properties.

Status: See Summary Table Of Changes at the beginning of the document.

3. Screen corruption in mode 6A (800x600x16 colors)

Problem: When a DOS application sets the mode to 6A, the video BIOS does not clear the memory upon setting the mode. Screen corruption can be seen since the memory was not cleared- what will be displayed is whatever was last in video memory. Once the application updates the screen, the corruption will disappear.

Implication: Temporary, corruption may appear on the screen when a DOS application first executes.

Status: See Summary Table Of Changes at the beginning of the document.

4. DOS application corrupt on title screen

Problem: Some DOS applications title screen may appear corrupted. This may appear upon returning to the title screen after playing the application.

Implication: Some DOS applications title screen may appear corrupted.

Status: See Summary Table Of Changes at the beginning of the document.

5. Screen corruption with 640x400x16,24 bpp in DOS

Problem: Some DOS applications may have screen corruption if the resolution is set to 640x400x16bpp or 640x400x24 bpp.

Implication: Possible screen corruption if user executes DOS applications that are in 640x400x16bpp or 640x400x24bpp modes.

Status: See Summary Table Of Changes at the beginning of the document.

6. Red border around screen

Problem: On some applications, a red border around the screen may appear. This has been seen on the game Heavy Gear*.

Implication: Red border appears around screen on some applications.

Status: See Summary Table Of Changes at the beginning of the document.

7. Corrupted Screen before ScanDisk Blue Screen

Problem: If the user has an improper shut-down, caused by either powering off your system while Windows* is running or by Windows* freezing up, Windows* brings up a ScanDisk Blue screen after the system is restarted. Before this blue screen, the screen is corrupted - vertical bars are shown on the screen.

Implication: Visual anomaly. Vertical lines can be seen before Scandisk executes after improper shutdown.

Status: See Summary Table Of Changes at the beginning of the document.

8. Application flashes in two modes on 2MB card only

Problem: When running Hexen II* at 400x300 or 512x384 with a 2Mb card, the screen flashes. All other modes work fine. All modes work with a 4Mb card.

Implication: Visual anomaly. With a 2MB card installed, the screen flashes.

Status: This issue is being investigated to see if it can occur on other applications. See Summary Table Of Changes at the beginning of the document.

9. BIOS function doesn't return 70 Hz Option

Problem: A private function is called with a mode that only supports 70 Hz refresh rate. The function returns successful but doesn't report the 70 Hz refresh rate as an option.

Implication: 70Hz is not reported as an option, even when it is available.

Status: See Summary Table Of Changes at the beginning of the document.

10. VBE test corrupted in 24bpp banked mode

Problem: In VBE test (real DOS mode), the Moire and Scrolling test has been corrupted in 24bpp banked mode with all available resolutions.

Implication: Corruption in VBE test.

Status: See Summary Table Of Changes at the beginning of the document.

11. Armored Fist2* returns to desktop at start of mission

Problem: Cannot play any mission on Armored Fist2*. The game will abort and return to desktop as soon as Mission starts.

Implication: Amored Fist 2* may not work properly.

Status: See Summary Table Of Changes at the beginning of the document.

12. Wing Command IV* not legible in SVGA 16bit MSDOS 6.22

Problem: In Wing Command IV*, color and picture may be messed up when playing animation. Set "Movie Video" to SVGA 16 Bit in "Video setting" menu during installation. Then click on "Save Setting and Run WC4" from main menu. Color and picture are corrupted when playing animation.

Implication: Visual anomaly. Color and picture are corrupted when playing animation.

Status: See Summary Table Of Changes at the beginning of the document.

13. DOS Text is cut off on bottom of TV screen

Problem: Several pixels are cut off at the bottom of the screen in DOS-25 Line mode. This results in the cursor disappearing on the bottom line of the screen. If you switch to DOS-50 Line mode, the bottom half of the characters on the bottom line are missing.

Implication: Visual anomaly. Problems can be seen on the TV, but not the monitor.

Status: See Summary Table Of Changes at the beginning of the document.

14. Watermarks appear with 1280x1024x8/16 x 85Hz Winbench'98 Video test

Problem: Watermarks appear with Video test (cp/in640s9.avi 640x480:30fps) of WinBench* 98 at resolution 1280x1024x8bpp & 16bpp, refresh rates 85Hz and 75Hz, using the monitor NEC P1150 or switching to that monitor selection. The driver and BIOS are vc980609 & vb225.

Implication: Note: there is still a slight watermark problem in 1024x768x24bpp when running cp640s9.avi, that is not fixable due to memory refresh bandwidth limitations.

Status: See Summary Table Of Changes at the beginning of the document.

15. When rebooting, you have to turn monitor off and on

Problem: When rebooting your system, you have to turn monitor off and turn it back again to see the data on the monitor. This seems to occur in several systems and also when you reboot the system after installing the Intel740™ graphics accelerator drivers.

Implication: User may need to turn monitor off then on to see data.

Status: See Summary Table Of Changes at the beginning of the document.

16. Screen corruption when changing mode on video overlay

Problem: Run Vidcap32.exe and show overlay video or preview. Change the desktop resolutions, starting from the lowest 640x480x8 to the highest 1024x768x24. Along the way you would see corruption at the bottom of the screen; the corruption looks like a band across the bottom of the screen.

Implication: Visual anomaly. Corruption at bottom of the screen when changing resolutions.

Status: See Summary Table Of Changes at the beginning of the document.

17. DDC CLK level should be kept high after data transfer

Problem: DDCCCL clock after data transfer should be pulled high. At this time it is pulled low. Specification indicates high status after data transfer. At system shut-down the signal goes high which causes the monitor to expect data to follow, thus confusing the monitor during the restart sequence. This can cause the monitor to enter protection mode. A physical power down and up of the monitor is required to exit this mode.

Implication: User may need to

Status: See Summary Table Of Changes at the beginning of the document.

Specification Changes

There are no known Intel740™ Graphics Accelerator Software specification changes at time of this document's release.

Specification Clarification

1. For optimal performance:

Windows* NT 4.0 environment:

It is recommended that either a 4 Mbyte or an 8 Mbyte local memory configuration be used in a Windows* NT 4.0 environment.

Software DVD:

CPU: Pentium® II processor - 300MHz (or higher)

System Memory: 32 MB

Local Video Memory: 4MB

Generation 2 DVD-ROM w/DMA*

Note: Always refer to the user manual and/or readme files that are included with the application for system setup.

*Bus mastering DMA required

2. TV-Out

For TV-Out erratum, refer to errata #16-27.

Mode X applications, which can change registers, or any other modes that can change timing registers may stop the system when TV-Out is enabled. This impacts DOS ModeX games and possibly DirectX ModeX games.

PC Monitor (VGA) display timings will change while TV-Out is on. User will see different position and size than what they expect.

3. Operating System support:

The following operating systems are currently supported with the standard VGA drivers(only). If the Intel740™ drivers are loaded onto one of the following legacy operating systems, the operating systems Standard VGA driver will be loaded.

Windows* 3.1, 3.11

Windows* NT 3.51

OS/2

Note: When loading the Intel740™ drivers and OSR2.1 or OSR 2.5 for the first time, the software should be loaded in the following order:

Load OSR2.0 or OSR 2.5

Load The "USB Supplement" (brings it up to OSR2.1 level or OSR2.5)

Load The Intel740™ drivers.

Note: Note: If this is not done in this order, then the standard Microsoft VGA drivers will be loaded.

4. Video Capture

PC 2.0a (or later) Capabilities - NTSC

Selection	Size	Raw frame rate	Compressed frame rate	Interlaced	1/2 bob
Full	640x480	~ 15fps	30 fps	x	
1/2	320 x 240	30 fps	30 fps		x
3/8	240 x 180	30 fps	30 fps		x
1/4	160 x 120	30 fps	30 fps		x
1/8	80 x 60	30 fps	30 fps		x

Note: NTSC = 0.6144 bytes/frame
IDE Limit = 15.95052 fp

PC 2.0a (or later) Capabilities - PAL

Selection	Size	Raw frame rate	Compressed frame rate	Interlaced	1/2 bob
Full	768 x 576	~ 11 fps	Not supported	x	
1/2	384 x 288	25 fps	25 fps		x
3/8	288 x 216	25 fps	25 fps		x
1/4	192 x 144	25 fps	25 fps		x
1/8	96 x 72	25 fps	25 fps		x

Note: PAL = 0.884736 bytes/frame
IDE Limit = 11.07675 fps

Document Changes

There are no known Intel740™ Graphics Accelerator Software Document Changes at the time of this document's release.

